

**DOCUMENT RESUME**

**ED 062 550**

**VT 015 245**

**TITLE** Doctoral Dissertations on Transportation, 1970. A Bibliography.  
**INSTITUTION** Northwestern Univ., Evanston, Ill.  
**PUB DATE** Jul 71  
**NOTE** 21p.  
**AVAILABLE FROM** Transportation Center, Northwestern University, 1818 Hinman Avenue, Evanston, Illinois 60204 (\$2.00)  
**EDRS PRICE** MF-\$0.65 HC-\$3.29  
**DESCRIPTORS** \*Bibliographies; \*Doctoral Theses; Traffic Control; \*Transportation

**ABSTRACT**

The third issue of this dissertation bibliography lists 283 doctoral theses in transportation, most of which were completed in 1969-1970. In addition to various aspects of transportation, the bibliography covers traffic analysis, urban travel analysis, and physical distribution. Entries include University Microfilms order number when available. A cumulated rank-order of U.S. universities by number of references, a geographic index, a subject index, and a cumulated author index are included.  
(BH)

ED 062550

*Doctoral Dissertations  
on Transportation  
1970*

A Bibliography

Transportation Center Library  
Northwestern University  
Evanston, Illinois

July 1971

U.S. DEPARTMENT OF HEALTH,  
EDUCATION & WELFARE  
OFFICE OF EDUCATION

THIS DOCUMENT HAS BEEN REPRO-  
DUCED EXACTLY AS RECEIVED FROM  
THE PERSON OR ORGANIZATION ORIG-  
INATING IT. POINTS OF VIEW OR OPIN-  
IONS STATED DO NOT NECESSARILY  
REPRESENT OFFICIAL OFFICE OF EDU-  
CATION POSITION OR POLICY.

## CONTENTS

	entry numbers
Introduction	
1.0 Transportation - General	645-692
1.2 History	693-694
2.0 Air transportation	695-707
2.1 International	708-711
2.2 Local service	712
2.3 Cargo	713-715
2.4 Airports	716-726
2.5 Labor	727-728
2.6 Airplane industry	729-731
3.0 Road passenger transportation	732
4.0 Trucking	733-737
4.1 Labor	738
5.0 Automotive industry	739-750
5.1 Labor	751-754
6.0 Railroads	755-765
6.1 Labor	767-768
6.2 History	769-784
7.0 Marine transportation	785-790
7.2 History	791-792
7.3 Shipbuilding	793
8.0 Ports	794-799
9.0 Inland waterways	800-803
9.1 Canals	804-806
10.0 Pipelines	807
11.0 Urban transportation	808-816
11.1 Transit	817-821
11.2 Commuter railroads	822
12.0 Roads	823-831
12.1 Economic effects	832-842
12.2 Finance and investment	843-852
13.0 Traffic analysis	853-868
13.1 Control	869-871
13.2 Safety	872-895
14.0 Urban travel analysis	896-910
14.1 Commuting	911-918
15.0 Physical distribution	919-922
15.1 Warehousing	923-924
16.0 School transportation	925-927

Cumulated rank-order of U.S. universities by number of references

Geographic index

Subject index

Cumulated author index

### INTRODUCTION

This third issue of the dissertation bibliography, containing 283 entries, covers mainly thesis production during 1969-1970. Dissertations from 1961 to 1968 are listed if missed in the two previous issues. A few 1971 references were available and are cited.

The basic sources used in compilation were: Massachusetts Institute of Technology, Abstract of Theses, 1963/64-1966/67; Dissertation Abstracts International, October 1969 A/B through May 1971 A/B; American Doctoral Dissertations, 1967/68; Journal of Business, January 1971; and American Journal of Agricultural Economics, November 1970 and May 1971.

Where available citations include University Microfilms order number.

The first issue of this bibliography was published in September 1968 (420 entries), covering 1961-67 and included an addendum to July 1968 (61 entries); the second issue was published in January 1970 (168 entries), covering mainly 1968 and part of 1969 thesis production. Total number of entries for the three issues is 932 including 4A, 7A, 421A, 421B, 440A and 446A. One entry, no.140, was erroneously duplicated by entry no.536.

Earlier issues of the bibliography may be purchased from the Transportation Center Communications Division, 1818 Hinman Avenue, Evanston, Illinois 60204.

# 1.0 TRANSPORTATION - GENERAL

645. Asfahl, Charles Raymond. Heuristic and dynamic programming generation methods for on-line storage and retrieval of freight rates by time-sharing computer. Arizona State, 1970. 294p. 70-21,952.
646. Billheimer, John W. Optimal route configuration with fixed link construction costs. Stanford, 1970.
647. Bozoki, George. Minimum-cost multi-commodity network flows. Purdue, 1969. 103p. 70-3857.
648. Chatterjee, Arun. An investigation of the feasibility of synthesizing mathematical models for forecasting travel on a regional highway network. North Carolina State, 1970. 117p. 71-10,320.
649. Elmassar, Samy Elsayy. A study of the impact of transportation costs for United States agricultural products on the European Economic Community and other countries. Maryland, 1969. 431p. 69-16,624.
650. Gamba, Juan Carlos. Theory and application of dynamic synthetic potential models. Pennsylvania, 1969. 325p. 70-16,147. Networks; Northeast Corridor.
651. Gessaman, Paul Hayden. A study of the impact of transportation on land use and rural life in four Southern Tier counties of New York. Cornell, 1970.
652. Glab, John Edward. Transportation's role in the development of southern Africa. American, 1970. 501p. 70-24,277.
653. Goldrick, M.K.D. The administration of transportation in Great Britain. London, 1967.
654. Hartwick, John Martin. Regional analysis by means of interregional input-output models and linear programming with applications to eastern Canada. Johns Hopkins, 1969. 340p. 70-11,787.
655. Jones, James Richard. An analysis of the effect of transportation costs on Arizona as a distribution center for the Southwest. Arizona State, 1969. 209p. 69-20,777.
656. Jones, John Fremont, Jr. Tourism as a tool for economic development with specific reference to the countries of Jamaica, Trinidad and Guyana. Florida, 1969/70.
657. Jordan, John Montague. Economic rationality in commodity flows - the case of the United States corn trade in 1964. Purdue, 1970. 222p. 71-2630.
658. Kahn, Ata Mohammad. Regional transport system plan selection problem: a decision theoretic framework for policy decisions. Waterloo, 1970.
659. Lev, Benjamin. Non iterative algorithm for solving special types of transportation problems. Case Western Reserve, 1970.
660. Lewis, Barbara Caroline. The Transporters' Association of the Ivory Coast: ethnicity, occupational specialization, and national integration. Northwestern, 1970. 577p. 71-1904.
661. Lieb, Robert Clarence. An examination of federal intermodal ownership policy related to common carriage in the United States. Maryland, 1970. 291p. 71-10,476.
662. Martins, Herman. Dimensions of national transportation policy. Syracuse, 1970. 410p. 70-24,098.
663. Meuter, Ralph F. The influence of high volumes of traffic on the threshold populations of central place functions. Oklahoma, 1970. 153p. 70-23,986.
664. Mayburg, Arnim Hans. An empirical study of the relationship between the intercity passenger transportation system and the social state of metropolitan areas in the Northeast Corridor. Northwestern, 1971.
665. Nihan, Nancy Lucille. Development of a multi-modal optimal operations model for the Northeast Corridor: a linear programming formulation. Northwestern, 1970. 207p. 71-1928.
666. Ochoa-Rosso, Felipe. Search and choice in transport systems planning, v.3; applications of discrete optimization techniques to capital investment and network synthesis problems. M.I.T., 1968. Distributed by CFSTI AD-692-836.
667. O'Sullivan, Patrick M. Transport networks and the distribution of economic activities in the Republic of Ireland. London, 1967. Author's subsequent publication: Transport networks and the Irish economy. London School of Economics Geography Paper no.4, 1969.
668. Park, Rolla Edward. Transportation and efficient growth. Princeton, 1970. 140p. 70-19,798. Rand Corporation paper P-4239, November 1969.
669. Parker, Alan Jay. Optimizing a complex system: a simulation study of a commodity distribution system. Columbia, 1969. 175p. 70-17,040.
670. Pearson, Philip Michael Lee. The planning and evaluation of intercity travel systems. Waterloo, 1969.
671. Powers, Thomas Francis. Toward a more dynamic travel policy: a critical review of the U.S. Travel Service. Georgia State, 1969. 243p. 70-20,661.
672. Prawda, Juan. Multi-period, multi-echelon single commodity, stochastic, production-allocation systems, subject to joint linear programming and shipping constraints. Northwestern, 1970.

673. Putman, Stephen Howard. An economic model for forecasting employment by industrial sector in small sub-areas of a large region. Pittsburgh, 1969. 281p. 70-2056. Effect of changes in transport facilities.
674. Richter, Charles E. The impact of industrial linkages on geographic association. Illinois, 1969/70.
675. Seguin, Vernon Charles. An investigation of the factors inhibiting growth of containerization in domestic surface freight shipments. Michigan State, 1971. 314p.
676. Sen, Lolita. Optimization of plant location and transport operating decisions: a set of viable models for developing nations. Northwestern, 1970. 136p. 71-10,187. India and other areas.
677. Snow, Charles R. Freight transportation and economic activity: A national and regional analysis. Indiana, 1969. 195p. 70-19,264.
678. Sparling, Ronald L. Transportation of Indiana exports. Indiana, 1969. 225p. 70-15,569.
679. Strawn, Harry Boger. The effects of alternative modes of transportation on the optimum number, sizes and locations of major corn handling facilities in the Southeast. Tennessee, 1969. 302p. 70-17,852.
680. Stucker, James P. An econometric model of the demand for transportation. Northwestern, 1969. 202p. 70-6541.
681. Swain, Harry Sheldon. Central place networks. Minnesota, 1970. 379p. 70-20,240.
682. Taiber, David. An application of systems analysis to underdeveloped countries: farm-to-market transportation. Southern California, 1969. 245p. 69-19,409. Potatoes; Colombia.
683. Townsend, Henry. A new theory of micro-economic decision making as applied to two models of freight modal choice. New School of Social Research, 1969. 121p. 70-11,276.
684. Velde, Paul Dwight. The impact of transit and nontransit transportation rate structures on the soybean processing industry. Purdue, 1970. 506p. 70-18,760.
685. Wasson, John Clark. The relevance of the common carrier concept to the contemporary American transport system. Indiana, 1970. 281p. 71-6920.
686. Watson, Peter L. Analysis of the time factor in the appraisal of transport improvement schemes. Edinburgh, 1970.
687. Wilbanks, Thomas John. Accessibility and agricultural development: a system approach to an aspect of the economic development process. Syracuse, 1969. 478p. 70-15,226. India.
688. Womer, Norman Keith. Estimating the relations of an input-output model with variable coefficients. Pennsylvania State, 1970. 227p. 70-24,205.
689. Wortman, Robert Hilton. A study of terminals as a component of the transportation system. Illinois, 1970. 123p. 70-21,090.
690. Yaseen, D.W. The through route network and accessibility of towns in England and Wales. London, 1968.
691. Young, Dennis Ralph. Passenger transport scheduling. Stanford, 1969. 274p. 69-17,463.
692. Zucker, Seymour. The value of time in leisure travel by automobile. New School for Social Research, 1969. 116p. 70-7664.

#### 1.2 TRANSPORTATION - HISTORY

693. Horna, Hernán. Francisco Javier Cisneros: a pioneer in transportation and economic development in Colombia. Vanderbilt, 1970. 349p. 70-24,871.
694. Thornton, Charles Arthur. The role of transportation (1790-1962): the implications in the decentralization and centralization of the wholesaling function in selected cities of East Tennessee. Tennessee, 1970. 330p. 71-7684.

#### 2.0 AIR TRANSPORTATION

695. Carter, E.C. A feasibility study of V/STOL air transportation in the Appalachian regions. Northwestern, 1969. 70-23.
696. Fruhan, William Edward, Jr. The fight for competitive advantage under regulation: a study of the domestic trunk air carriers. Harvard, 1970.
697. Jenkins, Gerald Martin. The impact of air transportation on ranching decisions in Hawaii. Hawaii, 1969. 129p. 70-4310.
698. Joy, Okie Maurice. The value of limited monthly information in forecasting airline price relatives. North Carolina, 1969. 181p. 70-3263.
699. Lawrence, Peter Alvin. A technique for airline systems evaluations by regulatory authorities. Stanford, 1970. 169p. 71-12,938. Same title, Stanford University Department of Industrial Engineering, Technical report no.70-1, 1970.
700. Leidecker, Joel Karl. The economic feasibility of jet air transportation systems for underdeveloped countries. Washington, 1969. 109p. 69-20,249. Ethiopia.

701. Miller, James Clifford, III. Scheduling and airline efficiency. Virginia, 1969. 209p. 70-4816.
702. Miyagi, Michihiro. Impact of jet aircraft introduction to the airline network of the United States. Ohio State, 1969. 211p. 70-14,076. Covers 1959-1965.
703. Randall, Reed Heber. Supplemental airline fleet planning: a mathematical programming approach. California (Berkeley), 1969. 144p. 70-13,142.
704. Reckerd, Thomas Earl. A study of the role and responsibilities of the professional general aviation pilot in profit making organizations. Indiana, 1970. 185p. 70-17,241.
705. Schultz, Randall L. The development of a marketing planning model through simultaneous-equation multiple regression analysis: an airline study. Northwestern, 1970. 210p. 71-1966.
706. Shaw, Gordon Charlton. Contributions to transportation scheduling. Toronto, 1968. National Library of Canada microfilm. Airline passenger service.
707. Thiriez, Hervé. Airline crew scheduling: a group theoretic approach. Massachusetts Institute of Technology, 1969. 108p. Published by MIT Flight Transportation Laboratory, Rpt.R-69-1, Oct.1969.

#### 2.1 AIRLINES - INTERNATIONAL

708. Buerghenthal, Thomas. Law-making in the International Civil Aviation Organization. Harvard, 1967/68. Published in revised form by Syracuse University Press, 1969.
709. Chuang, Richard Yo. The International Air Transport Association: a case study of a quasi-governmental organization. Minnesota, 1970. 335p. 71-8132.
710. McMahon, James Anthony. Price determination by a cartel: a study of the International Air Transport Association's pricing of the economy class in the North Atlantic. Boston College, 1969. 151p. 70-12,606.
711. O'Connor, William E. International cooperation vs. nationalism in the economic regulation of the world's airlines. American, 1970. 297p. 70-24,282.

#### 2.2 AIRLINES - LOCAL SERVICE

712. Pomeroy, Leslie Klett, Jr. An evaluation in terms of the public interest of the Civil Aeronautics Board's route strengthening policy for local service air carriers. American, 1970. 248p. 70-23,271.

#### 2.3 AIR CARGO

713. Cotterman, William Woods. An analysis of the demand for domestic air freight. Georgia State College, 1969. 118p. 69-18,671.
714. Demakopoulos, Steve Andrew. Methods and efficacy of long-range industry forecasts: a case study of the domestic air cargo industry. New York, 1970. 961p. (2v.) 71-2278.
715. Wallace, R.S. A domestic multi-modal goods distribution model with emphasis on air cargo. Waterloo, 1970.

#### 2.4 AIRPORTS

716. Doganis, R.S. The implication of the demand for air transport on airport planning for England and Wales. London, 1967.
717. Doherty, Richard Paul. The origin and development of Chicago-O'Hare International Airport. Ball State, 1970. 446p. 71-9048.
718. Graham, Ben Sanborn, Jr. Career mastery: a study of growth and decline of occupational identity among air traffic controllers at Los Angeles International Airport. California (Los Angeles) 1969. 343p. 70-2209.
719. Likens, James Dean. The welfare costs of non-optimal airport utilization: a case study of the Washington-Baltimore airports. Minnesota, 1970. 169p. 70-27,139.
720. Maddison, Donald. A model of the airfield surface system. California (Berkeley), 1970. 216p. 71-9752. Delay.
721. Odoni, Amedeo. An analytical investigation of air traffic in the vicinity of terminal areas. M.I.T., 1969. 203p. Distributed by NTIS: AD-700-814.
722. Shinn, Richard Duane. Regional airport planning: a systematic model. Washington, 1969. 327p. 69-20,272.
723. Simpson, Robert W. An analytical investigation of air traffic operations in the terminal area. M.I.T., 1963/4. 438p.
724. Sternberg, Carl Waldemar. Tripartite federalism: the impact of New York State "buying into" the Federal-Aid Airport Program. State University of New York (Albany), 1970. 337p. 70-25,482.
725. Stewart, Gerald Neil. Utilization of gate positions at metropolitan airports. California (Berkeley), 1970. 71-848. Also distributed by University of California Institute of Transportation and Traffic Engineering.
726. Wood, Donald Frank. Statewide general aviation airport planning: an application of benefit-cost analysis. Harvard, 1969. 166p.



## 2.5 AIR TRANSPORTATION - LABOR

727. Hopkins, George Emil. The Air Line Pilots Association (AFL-CIO): a study in elite unionism. Texas, 1969. 332p. 70-10,812. Covers through 1930's.
728. Simons, Robert Marchand. Manpower projections, recruitment needs and training requirements for commercial airline pilots in the United States 1968-1979. Southern California, 1969. 280p. 69-16,565.

## 2.6 AIRPLANE INDUSTRY

729. Bruins, Richard George. Federal aerospace procurement and local income: a case study of the aerospace industry in St. Louis. Washington (St. Louis), 1970. 161p. 70-18,917. McDonnell Douglas.
730. Shin, Tai Saeng. A financial analysis of the airframe-turned aerospace industry. Illinois, 1969. 229p. 70-977.
731. Walterman, Thomas Worth. Airpower and private enterprise: federal-industrial relations in the aeronautics field, 1918-1926. Washington, 1970. 590p. 70-26,886.

## 3.0 ROAD PASSENGER TRANSPORT

732. Williams, W.I. The economics analysis of bus and coach licensing decisions under the Road Traffic Acts of 1930 and 1960. London, 1968.

## 4.0 TRUCKING

733. Darby, Larry Franklin. An evaluation of federal regulation of common motor carriage. Indiana, 1969. 228p. 70-10,253.
734. Ellett, John Spears. Interstate corporate income taxation of truckers and movers. North Carolina, 1969. 593p. 70-12,053.
735. Harral, Clell Gaurey. The social costs of highway transport in Eastern India. Rochester, 1969. 191p. 70-2868.
736. Riddle, William Edward. Alternative transport systems for ice cream manufacturers. Pennsylvania State, 1969. 214p. 70-7242.
737. Viets, Robert Lee. Financial aspects of the class I, group C motor carriers of general commodities since 1957. Texas, 1970. 209p. 71-206.

## 4.1 TRUCKING - LABOR

738. Arnold, Thomas Richard. The Teamsters Union as a determinant of the structure of the trucking industry. Syracuse, 1970. 193p. 71-10,886.

## 5.0 AUTOMOTIVE INDUSTRY

739. Ackerman, Susan Rose. The demand for used automobiles in the United States - 1954-1966. Yale, 1970. 167p. 70-25,224.
740. Claus, James. The spatial dynamics of a population of gasoline service stations. California (Berkeley), 1969.
741. Croll, Robert Frederick. Government regulation of automobile distribution, 1933-1963: an economic analysis of its causes and consequences. Indiana, 1969. 591p. 70-10,577.
742. Gieselmann, Robert Dale. Automobile brand loyalty. Illinois, 1969. 131p. 70-853.
743. Katz, Harold. The decline in competition in the automobile industry, 1920-1940. Columbia, 1970. 519p. 70-23,446.
744. Kittrell, Frederick Jones. Profit forecasting tools and quantitative techniques for improved financial and managerial control in an automobile dealership. Mississippi, 1970. 293p. 70-24,327. Chevrolet.
745. Maricle, Kenneth E. An analysis of automobile leasing. Arizona State, 1970. 231p. 70-24,404. Maricopa County.
746. Nelson, Steven Robert. An economic analysis of antitrust policy in the automotive parts industry. Wisconsin, 1970. 285p. 71-308. 1939 to date.
747. Ramm, Wolfhard. The valuation and estimation of automobile services, 1961-1968. Northwestern, 1971.
748. Staelin, Richard. Information seeking and duration of the purchase decision process for new cars and major household appliances. Michigan, 1969. 401p. 70-14,650.
749. Stockdale, John Martin. An analysis of private passenger automobile underwriting. Iowa, 1970. 164p. 71-5831.
750. Wear, Scott, George Henry. The Peruvian automobile industry: a socio-economic and organizational inquiry. Cornell, 1970. 279p. 70-14,409.

## 5.1 AUTOMOTIVE INDUSTRY - LABOR

751. Caspi, Amnon. Turnover of local union officers: an organizational analysis. Michigan State, 1970. 139p. 70-20,443. U.A.W.



752. Drost, Jim L. Job characteristics of automotive mechanics in selected Iowa dealerships and garages. Iowa State, 1970. 137p. 71-7261.
753. Hall, Ronald Walter. A study to determine the educational needs of industrial technologists in the automotive type manufacturing industries. Arizona State, 1970. 161p. 70-19,926.
754. Johnson, Lawrence Alexander. Study of the Ford Motor Company's inner-city hiring program (Detroit, Michigan). Stanford, 1970. 109p. 71-12,928.

#### 6.0 RAILROADS

755. Barr, Brenton M. The role of transfer costs in the location and flow patterns of the Soviet wood-processing industry. Toronto, 1968. Available from National Library of Canada on microfilm. Subsequent publication based on this dissertation: The Soviet wood-processing industry, a linear programming analysis of the role of transportation costs in location and flow patterns, University of Toronto Press, 1970. Rail.
756. Bergmann, Dietrich Rudolf. Sensitivity of passenger railway system performance to technical and operational innovation. Stanford, 1969. 330p. 70-10,426. Also published by Stanford University.
757. Boone, James Weston. The econometric forecasting of national rail car requirements for bituminous coal. Pennsylvania State, 1970. 171p. 70-24,145.
758. Buckwell, Lloyd John. Variable costs for internal management: a case study of a railroad. Minnesota, 1969. 203p. 69-20,005.
759. Chen, Chuan-Yu Ed. Estimating cost functions for the United States railroads. New York, 1969. 110p. 70-3049.
760. Eicher, John Paul. An investigation of the requirements for collision avoidance systems at railroad-highway grade-crossings - a simulation model. Catholic, 1970. 264p. 70-22,129.
761. Gallamore, Robert Edmund. Railroad mergers: costs, competition and the future organization of the American railroad industry. Harvard, 1967/68.
762. Hamburg, James Frederic. The influence of railroads on the processes and patterns of settlement in South Dakota. North Carolina, 1969. 500p. 70-3240.
763. McCall, John Byron. An economic study of railroad passenger service: the Santa Fe and Southern Pacific Railroads, 1950-1965. Oklahoma State, 1968. 165p. 69-14,279.
764. Roman, James Rudolph, Jr. Opportunities for railroad passenger service in the northeast corridor. George Washington, 1970. 220p. 71-5369.
765. Sundaralingam, K. The role of railway transport in Ceylon: present problems and future prospects. London, 1968.
766. Ventura, Jack Sal. Railroad freight cars economic models of investment and allocation. Georgetown, 1970. 397p. 70-23,813.

#### 6.1 RAILROADS - LABOR

767. Desmarais, Ralph Henry. The Supply and Transport Committee, 1919-1926: a study of the British government's method of handling emergencies stemming from industrial disputes. Wisconsin, 1970. 280p. 70-19,139. Rail.
768. Lightner, David Lee. Labor on the Illinois Central Railroad, 1852-1900. Cornell, 1969. 427p. 70-5777.

#### 6.2 RAILROADS - HISTORY

769. Albro, Martin. Enterprise denied: the impact of rate regulation on the growth of American railroads, 1897-1917. Columbia, 1970. To be published by Columbia University Press, 1971.
770. Baehr, George Bernard, Jr. The attempt at a transportation empire in New England: the New York, New Haven and Hartford Railroad, 1872-1913. Notre Dame, 1969. 586p. 70-7885.
771. Bonavia, M.R. The organisation of British railways 1948-1964. London, 1968.
772. Dick, Trevor John Orme. An economic theory of technological change: the case of patents and limited states railroads 1871-1950. Washington, 1970. 155p. 71-8481.
773. Frey, Robert Lovell. A technological history of the locomotives of the Northern Pacific Railway Company. Minnesota, 1970. 750p. 70-27,117.
774. Haywood, Richard Mowbray. The beginning of railway development in Russia in the reign of Nicholas I: 1835-1842. Columbia, 1966. 434p. 70-6699. Same title, Duke University Press, 1969.
775. Hoffman, Donald Stone. Railways and railway politics in south Germany: defensive particularism at the state level, 1835-1970. Delaware, 1969. 331p. 69-16,592.
776. Miner, Harold Craig. The thirty-fifth parallel project: the formation of a St. Louis-San Francisco railway system, 1853-1890. Colorado, 1970. 366p. 70-23,735.
777. Reeder, Clarence A., Jr. The history of Utah's railroads 1869-1883. Utah, 1970. 473p. 70-23,828.

778. Ross, Delmer Gerrard. The construction of the railroads of Central America. California (Santa Barbara), 1970. 512p. 71-12,517.
779. St. John, Jacqueline D. John F. Stevens: American assistance to Russian and Siberian railroads, 1917-1922. Oklahoma, 1969. 348p. 69-21-992.
780. Saunders, Richard Leroy, Jr. Railroad consolidation in the Eastern United States, 1940-1964. Illinois, 1971. 2v.
781. Smith, Robert David, Jr. Cost problems of the Rutland Railroad and its successors from - 1937 to 1968. Massachusetts, 1970. 321p. 71-2725.
782. Reylor, Patrick Robinson. The Trans-Siberian Railroad and the Russian Revolution of 1905. Tennessee, 1969. 487p. 70-7604.
783. Upson, Helen Rena. Order and system: Charles Francis Adams, Jr. and the railroad problem. Iowa, 1969. 320p. 69-21-740.
784. Voelker, Gottfried Eberhard. The impact of railroads on the German economy in the late nineteenth century. Nebraska, 1970. 167p. 71-2934.

#### 7.0 MARINE TRANSPORTATION

785. Athay, Robert E. An economic appraisal of Soviet merchant shipping policy. American, 1969. 209p. 60-17,853.
786. Johannsson, Kjartan. A heuristic approach to the multi-discharge routing problem. Illinois Institute of Technology, 1969. 137p. 69-19,730. Tank ships.
787. Lubore, Stephen Hugh. Extensions of the tanker scheduling problem. Johns Hopkins, 1969. 131p. 69-21,079.
788. McDonald, Hugh John. A linear programming model to optimize the transfer cost and facility requirements for U.S. grain exports. Ohio State, 1969. 252p. 69-23176.
789. Marcus, Henry Stuart. A management rationale for planning ship replacement in the subsidized liner fleet. Harvard, 1970. 253p.
790. Metaxas, B.N. Some economic problems of the tramp shipping industry. London, 1967.

#### 7.2 MARINE TRANSPORTATION - HISTORY

791. Linder, Elisha. The maritime text of Ugarit; a study in late Bronze Age shipping. Brandeis, 1970. 249p. 70-25, 577.
792. Yates, Richard Croson. The cost of ocean transportation between England and Jamaica: 1784-1788. Washington, 1969. 296p. 70-8436.

#### 7.3 SHIPBUILDING

793. Crowther, Simeon John. The shipbuilding industry and the economic development of the Delaware Valley, 1681-1776. Pennsylvania, 1970. 247p. 71-7796.

#### 8.0 PORTS

794. Amoah, Frank Emmanuel. The growth and decline of seaports in Ghana: 1800-1962. California (Los Angeles), 1969. 269p. 70-14,253.
795. Dickason, David Gordon. The efficiency of the major Indian seaports. Indiana, 1970. 240p. 71-6840.
796. Dohlen, Gerard Nicholas von. The investment decision making process of the Port of New York Authority: a benefit-cost study. Columbia University, 1970. 406p. 70-18,866. Second level, George Washington Bridge.
797. Hutcheon, William Richmond, Jr. A cost-benefit analysis of Seattle foreign-trade zone no.5. Washington, 1969. 111p. 69-20,239.
798. Mihelid, Dusan. The political element in the port geography of Trieste. Chicago, 1969. Chicago. University. Department of Geography. Research series no.126, 1969.
799. Robinson, Ross. Spatial structuring of port-linked flows: the port of Vancouver, Canada, 1965. British Columbia, 1968.

#### 9.0 INLAND WATERWAYS

800. El-Mezawie, Ali Abd El-Salam. A mathematical model for the ultimate tow size for navigation of sharp bends on the lower Mississippi River. Texas, 1970. 87p. 70-18,225.
801. Haites, Erik Frisco. Ohio and Mississippi River transportation 1810-1860. Purdue, 1969. 277p. 70-8895.
802. Schoell, William Frederick III. Causes and effects of the recent growth in barge transportation: with emphasis on the period 1953-1964. Arkansas, 1969. 497p. 70-376.

803. Sydor, Leon Paul. The St. Lawrence Seaway: national shares in primary seaway benefits. Princeton, 1970. 305p. 70-19,803.

#### 9.1 CANALS

804. Barber, Henry Eugene. The history of the Florida cross-state canal. Georgia, 1969. 318p. 70-10,154.  
805. Filante, Ronald William. An inquiry into the sources of surplus revenues on the Erie Canal 1825 to 1860. Purdue, 1969. 220p. 70-8888.  
806. Richard, Alfred Charles, Jr. The Panama Canal in American national consciousness, 1870-1922. Boston, 1969. 309p. 69-18,740.

#### 10.0 PIPELINES

807. Babcock, Henry Ame. The pipeline transportation of solids. Colorado, 1970. 153p. 71-5865.

#### 11.0 URBAN TRANSPORTATION

808. Cockfield, Richard W. A design method for the preparation of a preliminary urban land use/transport plan. Waterloo, 1970. Same title, Department of Civil Engineering, University of Waterloo, May 1970, 126p.  
809. Hall, William King. A queueing theoretic approach to the allocation and distribution of ambulances in an urban area. Michigan, 1969. 277p. 70-14,535.  
810. Hallin, Richard Ray. The Tri-State Transportation Commission: a capability analysis of a metropolitan policy subsystem. Columbia, 1969. 554p. 69-15,674.  
811. Jeffress, Philip Wade. Racial employment patterns in the urban mass transportation industry. Kentucky, 1969. 164p. 70-16,974.  
812. O'Connor, Arthur D. The offspring generation method of designing minimum cost and user acceptable guideway configurations for automated transportation systems. State University of New York (Buffalo), 1970. 365p. 71-7202.  
813. Rea, John C. Designing urban transportation system: an approach to route-technology selection problem. Washington, 1971.  
814. Saatcioglu, Omer. Highway and transit capacity additions to urban transportation networks. Pittsburgh, 1970. 246p. 71-40,0. Pittsburgh as case.  
815. Woodhull, Joel. Urban public transportation: specification of service parameters for a two-mode cooperative hierarchy. Rensselaer Polytechnic Institute, 1970. 181p. 71-12,833. Travel time.  
816. Zakaria, Thabet. Transportation systems evaluation: toward a method and a set of criteria for evaluating alternative transportation plans for urban regions. Pennsylvania, 1968. 227p. 69-15,142.

#### 11.1 TRANSIT

817. Dicesare, Frank. A systems analysis approach to urban rapid transit guideway location. Carnegie-Mellon, 1970. 227p. 70-21,588.  
818. McDonald, William Smith. The Union Traction Company of Indiana. Ball State, 1969. 167p. 69-16,579.  
819. Osuna, Edgar Elias. Control strategies for idealized bus systems. California (Berkeley), 1969. 86p. 70-17,635.  
820. Peterson, Thomas Charles. An economic evaluation of the Southern California Rapid Transit District: its proposed solution to the transportation problem in Los Angeles. California (Los Angeles), 1970. 249p. 71-675.  
821. Williams, Thomas Arthur. Scheduling algorithm for a demand-response bus system. Rensselaer Polytechnic Institute, 1970. 166p. 71-12,831. Dial-A-Bus.

#### 11.2 COMMUTER RAILROADS

822. Salzborn, F.J.M. Mathematical models for the optimum scheduling of commuter trains. Adelaide, Mar. 1970. 68p.+ Application to Adelaide.

#### 12.0 ROADS

823. Albert, W.I. The road transport system in England 1700-1839. London, 1968.  
824. Berg, William Douglas. An analysis of the local rural road administrative system in Illinois. Illinois, 1970. 137p. 71-5041.  
825. Brach, Philip Louis. A method for establishing priorities among urban road improvement projects. Catholic, 1969. 106p. 70-3463. Travel time.  
826. Chatfield, Benjamin Vantine. Application of formal logic to administration of the federal-aid highway program. Stanford, 1969. 197p. 69-17,403. Use of artificial language devised by Rudolf Carnays for logical analysis of laws.  
827. Manheim, Marvin L. Highway route location as a hierarchically-structured sequential decision process, an experiment in

the use of Bayesian decision theory. M.I.T., 1964. 199p. Issued as M.I.T. CE Res.Rpt.R64-15.

828. Sachdev, Labh Singh. Planning rural highways in India. Washington, 1970. 280p. 71-1021.
829. Schlacter, John Lathrop. Increased participation in the decision-making process among field crews in the Ohio Department of Highways: a field experiment. Ohio State, 1969. 218p. 70-14,093.
830. Turner, Alan Keith Finlay. Computer-assisted procedures to generate and evaluate regional highway alternatives. Purdue, 1969. 314p. 69-17,283.
831. Witczak, Matthew Walter. A generalized investigation of selected highway design and construction factors by regional geomorphic units within the continental United States. Purdue, 1970. 420p., 2v. 70-22,027.

#### 12.1 ROADS - ECONOMIC EFFECTS

832. Bishop, Alvin Bruce. Socio-economic and community factors in planning urban freeways. Stanford, 1970. 231p. 70-18,380. Same title, Stanford University Programs in Engineering Economic Planning, 1969.
833. Dommel, Paul Robert. Intergovernmental and administrative factors in environmental policy research: a case study of highway and land use policies in Massachusetts. Massachusetts, 1970. 291p. 71-8608.
834. Gould, Robert Barris. Strip highway settlement: a case study of the area in the vicinity of U.S. route 60 in eastern Kentucky hills region. Tennessee, 1969. 123p. 70-7567.
835. Hafner, James Allan. The impact of road development in the central plain of Thailand. Michigan, 1970. 324p. 71-4620.
836. Hall, Jerome William. The impact of urban freeways on highway user benefits. Washington, 1969. 169p. 70-14,759. Seattle example.
837. Isibor, Edward Iroguhi. Modeling the impact of highway improvements on the value of adjacent land parcels. Purdue, 1970. 222p. 70-18,672. Same title, issued as Purdue University report.
838. Kuehn, John Allan. Highway impacts in Ozark incomes and employment. Missouri, 1971. 112p. 71-3351.
839. McBride, George Adams. A plan formulation methodology for the Appalachian Development Highway System. North Carolina, 1969. 178p. 70-3280.
840. Martinson, Tommy Lee. Selected changes in agricultural production and economic rent along the Western Highway of Honduras: 1952-1965. Kansas, 1969. 221p. 70-11,052.
841. Pool, John Charles. A posteriori evaluation of the economic and social effects of investments in transportation infrastructure: the Mexican Nayarit-Jalisco coastal highway: a case study. Colorado, 1969. 282p. 70-5885.
842. Soberman, Richard Martin. Road transport and economic development in the Venezuelan Guayana. M.I.T., 1963/4. 336p.

#### 12.2 ROADS - FINANCE AND INVESTMENT

843. Agnello, Richard J. The second Chesapeake Bay bridge: a cost-benefit study in public highway investment. Johns Hopkins, 1970. 172p. 70-26,740.
844. Johnson, Larry Ray. A competitive model for highway construction proposals. Oklahoma State, 1969. 163p. 70-21,417.
845. Lamb, Steven Ward. The determination of the benefits of economics of scale as applied to rural road systems in Kansas. Kansas State, 1970. 201p. 71-11,325.
846. Lapin, Howard S. New approaches to analysis of projects to extend all-weather roads into areas of agricultural potential. Catholic, 1969. 112p.
847. Hejal, Salim Said. An economic priority model for rural highway improvements. Purdue, 1971. 126p. Purdue University Joint Highway Research Project, December 1970, no.28.
848. McFarland, William Franklin. Economic efficiency in highway expenditures. Tulane, 1970. 205p. 70-24,535. Cost-benefit.
849. Olson, Kent William. Expenditure criteria for the development of the National Forest road system. Oregon, 1969. 305p. 70-15,349.
850. Payne, Brian Randolph. An economic analysis of alternative rates of investment in National Forest road construction: the North Umpqua case. California (Berkeley), 1969. 210p. 70-17,639.
851. Thornton, Neal Blair. The politics of the Chesapeake Bay Bridge-Tunnel. Virginia, 1969. 244p. 70-4836.
852. Vars, Raymond Charles, Jr. The tax cost of freeways in San Francisco. California (Berkeley), 1969. 133p. 70-6250.

#### 13.0 TRAFFIC ANALYSIS

853. Ashton, Winifred D. Problems in the theory of road traffic flow. London, 1969.

854. Bettinger, Charles Ollie, III. Estimation and prediction of interzonal traffic flows using quantitative models. Texas, 1969. 139p. 70-10,749.
855. Brill, Edward Abe. Stochastic models of vehicular traffic congestion. Stanford, 1970. 96p. 71-12,861.
856. DeWald, Charles Griffith. Constrained flow models for traffic network analysis. Johns Hopkins, 1968. 193p. 71-2944.
857. Dial, Robert Barkley. Probabilistic assignment: a multipath traffic assignment model which obviates path enumeration. Washington, 1970. 164p. 71-960.
858. Emerson, Charles Robert. A parking analysis and planning technique. Purdue, 1970. 275p. Campus parking.
859. Heathington, Kenneth Wayne. On the development of a freeway driver information system. Northwestern, 1969. 297p. 70-65.
860. Hoshi, Takao. Some queueing problems generated by an intersection. Johns Hopkins, 1970. 96p.
861. Kanafani, Adib. The location of parking facilities in town centers. California (Berkeley), 1969. 160p. 70-6133.
862. Kirk, Billy Mac. Human factors in the moving merge process. Texas A&M, 1969. 162p. 70-9693.
863. Lehoczy, John Paul. Stochastic models in traffic flow theory: intersection control. Stanford, 1969. 107p. 70-10,482.
864. Levin, Moshe. Some investigations of the freeway lane changing process. Texas A&M, 1970. 242p. 71-8892.
865. Shorrock, Richard William. Caravans in traffic flow. Stanford, 1970. 89p. 71-2830.
866. Tolle, John Edward. The distribution of vehicular headways - a stochastic model. Ohio State, 1969. 135p. 69-22,220.
867. Weiner, Sidney. Queueing models for passing delays on two and three lane freeways. George Washington, 1970. 254p. 71-12,305.
868. Yagar, Samuel. Analysis of the peak period travel in a freeway-arterial corridor. California (Berkeley), 1970. 201p. 71-9961. Traffic assignment.

### 13.1 TRAFFIC CONTROL

869. Messer, Carroll Joe. A design and synthesis of a multilevel freeway control system and a study of its associated operational control plan. Texas A&M, 1969. 180p. 70-11,561.
870. Panyan, Wayne David. Urban traffic system simulation and control. Michigan State, 1969. 138p. 70-15,101.
871. Rashba, Sheldon Franklin. Freeway management and control. Polytechnic Institute of Brooklyn, 1970. 140p. 70-26,093.

### 13.2 TRAFFIC SAFETY

872. Brown, Robert Lowes. Competition and the Florida automobile insurance plan. Florida, 1970. 128p. 71-12,737.
873. DeSantis, Richard Phillip. A descriptive study of strategies used in three dissimilar communication campaigns for the purpose of making generalized applications to the field of traffic safety. Michigan State, 1970. 155p. 71-11,817.
874. Emery, Marie Therese (Sister). A study of certain factors related to the patterns of driving, accident and violation rates of 436, 17 and 18 year-old licensed drivers from two Lansing Catholic schools. Michigan State, 1969. 137p. 70-15,021.
875. Erickson, Carl Oscar. A study of administrative practices and policies for high school driver education in Illinois. Illinois State, 1970. 193p. 71-3954.
876. Fitzsimmons, James Albert. Emergency medical systems: a simulation study and computerized method for employment of ambulances. California (Berkeley), 1970. 227p. 71-618.
877. Fruchter, Dorothy Anne Sewell. The home-completion test as a learning device for driver license renewal applicants. Texas, 1970. 100p. 71-11,535.
878. Haefner, Lonnie Edward. Optimal statistical decisions in highway safety related to geometric design. Northwestern, 1970. 276p. 71-10,122.
879. Hakkert, A.S. Road accident patterns and the measures they suggest for increasing road safety. London, 1969.
880. Hall, David Carroll. A study of the effectiveness of two teaching techniques in driver education considering ethnicity, socioeconomic status, and sex as contributing sources of variation. New Mexico State, 1969. 105p. 70-11,512.
881. Keller, Hartmut Ernst Max. An analysis of freeway emergency service systems. California (Berkeley), 1969. 199p. 70-13,080.
882. McDaniel, Charles Emmette. A study to compare the relative effectiveness of selected laboratory and classroom programs



in driver and traffic safety education. Michigan State, 1970. 264p. 71-11,913.

883. McDonald, Harry Lang. Problems of a select group of older drivers. Michigan State, 1970. 107p. 71-2118.
884. McPherson, Kenard. A systematic analysis of traffic education for beginning motorists. Michigan State, 1970. 223p. 70-20,494.
885. Mills, Robert Clayton. A survey of opinions of secondary school principals toward the driver education programs offered in the public schools of the state of Michigan. Michigan State, 1970. 255p. 71-11,924.
886. Murray, Michael Leroy. Utility analysis and the selection of an automobile collision insurance deductible. Oregon, 1970. 224p. 71-1335.
887. Olsen, Richard A. Detection of events in the visual periphery during pursuit tracking in long-term performance and in hypnotically induced fatigue. Pennsylvania State, 1970. 153p. Issued by the University's Transportation and Traffic Safety Center, September 1970.
888. Paletz, David Leon. Influence in Congress: an analysis of the nature and effects of conference committees utilizing case studies of poverty, traffic safety, and congressional redistricting legislation. California (Los Angeles), 1970. 571p. 70-22,821.
889. Richards, William Thomas. An analysis of university problems and needs in the professional preparation of traffic and safety specialists. Wisconsin, 1970. 323p. 71-3484.
890. Ritzel, Dale Owen. The development of an evaluation instrument relating to teacher effectiveness in driving simulation. Southern Illinois, 1970. 247p. 71-10,053.
891. Schulz, August John. Construction of an altitude scale for male adolescent motor vehicle traffic offenders and non-offenders. New York, 1969. 190p. 70-748.
892. Weaver, Jack Kent. A comparison of the Drivocator system and the conventional classroom method of instruction for accomplishing driver and traffic safety education objectives. Florida State, 1970. 140p. 71-7130.
893. Weber, Donald Chester. A stochastic model for automobile accident experience. North Carolina State (Raleigh) 1970. 148p. 70-18,984.
894. Weinstein, Sanford Arthur. Recognition of photographed traffic hazards as an indicator of automobile accident involvement. Columbia, 1970. 125p. 71-8972.
895. Wintrode, Nevin Leroy. An evaluation of the effect of a communication model designed to improve development of desirable attitudes toward safe driving. West Virginia, 1969. 195p. 70-6318.

#### 14.0 URBAN TRAVEL ANALYSIS

896. Demetsky, Michael John. An investigation of the application of behavioral concepts in the formulation of areawide modal demand analysis models. Carnegie-Mellon, 1971. 214p. 71-9678.
897. Deutschman, Harold Daniel. Towards an operational model of residential location. Northwestern, 1969. 218p. 70-38.
898. Eliot Hurst, M.E. Land use and traffic generation in urban areas, with particular reference to Perth. Durham, 1966.
899. Fan, Kenneth Kuan-Ling. A study of the relation of the change of vehicular travel time and size of population to the change in number and types of trips among communities. Utah State, 1969. 148p. 70-2394.
900. Fruin, John Joseph. Designing for pedestrians a level of service concept. Polytechnic Institute of Brooklyn, 1970. 151p. 70-26,049.
901. Ginn, James Royce. Transportation considerations in an individual's activity system. Northwestern, 1969. 177p. 70-6465.
902. Gur, Yehuda Jacob. An accessibility sensitive trip generation model. Northwestern, 1971.
903. McGillivray, Robert Gordon. Binary choice of transport mode in the San Francisco Bay Area. California (Berkeley), 1969. 55p. 70-6162.
904. Nakkash, Tamman Zaki. Activity-accessibility models of trip generation. Purdue, 1969. 220p. 70-3945.
905. Penn, William M., Jr. Differences between the "perceived costs" and "resource costs" of urban passenger transportation and their effects upon the choice of travel mode - with special application to the Baltimore area in 1962. Duke, 1969. 160p. 70-2165.
906. Schmidt, Joseph William, Jr. Comparison of urban trip generation equations. West Virginia, 1969. 161p. 69-20,714.
907. Shaughnessy, Thomas William. The influence of distance and travel-time on central library use. Rutgers, 1970. 244p. 71-3100.
908. Shuldiner, Paul William. Traffic generating characteristics of urban residences. California (Berkeley), 1961.
909. Stutz, Frederick Paul. Spatial analysis of urban inter-residential social trip flows. Michigan State, 1970. 164p. 71-11,986. Lansing data.

910. Trzepacz, Mathew Edmond. Household trip production: a comparison of three urban areas in upstate New York. Rensselaer, 1970. 161p. 70-19,954.

#### 14.1 COMMUTING

911. Catanese, Anthony James, Jr. The separation of home and work place in urban structure and form: a longitudinal analysis of two urban regions. Wisconsin, 1969. 394p. 69-12,350.
912. Davies, Christopher Shane. The reverse commuter transit problem in Indianapolis. Indiana, 1970. 166p. 70-22,829.
913. Grimes, Algie Ray, Jr. An analysis of the determinants of the commuting and residence patterns of the Oklahoma City Air Material Area labor force. Oklahoma State, 1970. 168p. 71-11,158.
914. Halvorson, Peter Leon. Residential location and the journey-to-work: Charleston, West Virginia. Cincinnati, 1970. 243p. 71-1514.
915. Leigh, R. The journey to work to central London 1921-1951: a geographical analysis. London, 1968.
916. Mouchahoir, George Ely. The relationship of work trips to employment connected social and economic factors. Georgia Institute of Technology, 1970. 157p. 71-12,359. Also distributed by NTIS (PB 197816).
917. Scarlett, Maurice John. The travel behaviour of urban commuters. Pittsburgh, 1970. 241p. 70-24,214.
918. Yu, Eui Young. Correlates of commutation rates in large metropolitan areas: multivariate analysis of data for the United States, 1960. Pennsylvania, 1969. 230p. 69-21,464.

#### 15.0 PHYSICAL DISTRIBUTION

919. Dicer, Gary Norman. Toward a theory of international logistics. Indiana, 1969. 262p. 69-21,647.
920. Lynagh, Peter M. Physical distribution patterns for the metal service center industry. Michigan State, 1970. 215p. 71-2111.
921. Rider, Graham Wharton. An exploration of the concept of logistics: a constitutive approach. Arizona State, 1970. 210p. 70-20,911.
922. Whittington, Frederick Brown, Jr. Classificatory analysis of urban physical distribution activity. Louisiana State A&M, 1969. 239p. 70-274.

#### 15.1 WAREHOUSING

923. Khumawala, Basheer Ahmad. An efficient branch and bound algorithm for warehouse location. Purdue, 1970. 162p. 71-2636.
924. Van Auken, Stuart. A new gravitational approach to least transportation cost warehouse location. North Texas State, 1970. 242p. 71-574.

#### 16.0 SCHOOL TRANSPORTATION

925. Bloom, Morris. An analysis of the administration of the pupil transportation program in the City of New York. New York, 1968. 382p. 70-2468.
926. Bonnes, Robert Thomas. Public school pupil transportation in Arizona. Arizona State 1970. 127p. 70-21,948.
927. Newton, Rita Mochan. Bus routing in a multi-school system. State University of New York (Buffalo), 1970. 138p. 71-6097.



NUMBER OF ENTRIES, BY U.S. UNIVERSITY, CUMULATED FOR THREE BIBLIOGRAPHY ISSUES

- 55 Northwestern
- 40 Indiana
- 38 California (Berkeley)
- 37 Purdue
- 35 Columbia
- 33 Michigan State
- 32 Harvard
- 31 Washington
- 27 Illinois, Ohio State, Stanford
- 24 Wisconsin
- 23 Michigan
- 20 Texas A & M
- 19 California (L.A.), Pennsylvania
- 18 M.I.T.
- 15 Chicago
- 14 New York
- 13 Pennsylvania State, Pittsburgh, Texas
- 12 Minnesota, North Carolina
- 11 American, Cornell
- 10 Syracuse
- 9 Johns Hopkins
- 8 Arizona State, Arkansas, Iowa, Princeton, Virginia
- 7 Alabama, Colorado, Maryland, Southern California
- 6 Georgia, Iowa State
- 5 Case-Western Reserve, Oklahoma State, Polytechnic Institute of Brooklyn, Tennessee
- 4 Catholic, Florida, George Washington, Nebraska, Oregon, Utah
- 3 Ball State, Boston College, Carnegie-Mellon, Cincinnati, Florida State, Kentucky, Massachusetts, New School for Social Research, Rensselaer, S.U.N.Y. (Buffalo), West Virginia, Yale
- 2 Fordham, Georgetown, Georgia Institute of Technology, Georgia State College, Hawaii, Illinois Institute of Technology, Kansas, Kansas State, Kent State, Louisiana State, Mississippi, North Carolina State, Notre Dame, Oklahoma, Rutgers, St. Louis, Southern Illinois, Tulane, Vanderbilt
- 1 Arizona, Boston, Brandeis, California (Santa Barbara), Clark, Colorado State College, Connecticut, Delaware, Duke, Idaho, Illinois State, Missouri, New Mexico State, North Carolina (Raleigh), Rochester, South Dakota, S.U.N.Y. (Albany), Utah State, Washington (St. Louis), Washington State, Wayne State, Western Reserve

# GEOGRAPHIC INDEX

An (h) following an entry number indicates an historical viewpoint. Due to the prevalence of American topics "United States" is not listed. Named canals are listed in this index, but not in the Subject Index.

Africa, 652  
 Appalachia  
   roads, 839  
   V/STOL, 695  
 Arizona  
   costs, 655  
   school transportation, 926  
 Baltimore  
   mode choice, 905  
 California  
   airline regulation, 699  
 Canada  
   costs, 654  
 Central America  
   railroads, 778 (h)  
 Ceylon  
   railroads, 765  
 Chicago  
   airports, 717  
 Colombia, 693 (h)  
 Delaware Valley  
   shipbuilding, 793 (h)  
 Developing areas, 682  
   air transportation, 700  
   plant location, 676  
 District of Columbia  
   airports, 719  
 Erie Canal, 805 (h)  
 Ethiopia  
   air transport, 700  
 Europe  
   agricultural products, 649  
 Florida Cross-State Canal, 804 (h)  
 Germany  
   railroads, 775 (h), 784 (h)  
 Ghana  
   ports, 794 (h)

Great Britain  
   administration, 653  
   airports, 716  
   railroads, 771 (h)  
   roads, 823 (h)  
   shipping, 792 (h)  
 Guyana  
   tourism, 656  
 Hawaii  
   ranching, 697  
 Honduras  
   roads, 840  
 Illinois  
   road administration, 824  
 India, 676  
   ports, 795  
   road transport, 735  
   roads, 828  
 Indiana  
   exports, 678  
 Indianapolis  
   commuting, 912  
 Ireland, 667  
 Ivory Coast, 660  
 Jamaica  
   shipping, 792 (h)  
   tourism, 656  
 Kansas  
   roads, 845  
 London  
   journey to work, 915  
 Los Angeles  
   transit, 820  
 Massachusetts  
   roads, 833  
 Mexico  
   roads, 841

Mississippi River, 801 (h)  
 New York State  
   airports, 724  
   transport impact, 651  
 Northeast Corridor, 650, 664, 665  
   rail passenger service, 704  
 Ohio River, 801 (h)  
 Oklahoma City  
   commuting, 913  
 Ozarks region, 838  
 Panama Canal, 806 (h)  
 Peru  
   automotive industry, 750  
 St. Lawrence Seaway, 803  
 San Francisco  
   freeway cost, 852  
   mode choice, 903  
 Seattle  
   port, 797  
 South Dakota  
   railroads, 762  
 Tennessee, 694 (h)  
 Thailand  
   roads, 835  
 Trieste  
   port, 798  
 Trinidad  
   tourism, 656  
 Utah  
   railroads, 777 (h)  
 Vancouver  
   port, 799  
 U.S.S.R.  
   merchant marine, 785  
   railroads, 774 (h), 779 (h), 782 (h)  
   wood products, 755  
 Venezuela  
   roads, 842

# SUBJECT INDEX

An (h) following an entry number indicates an historical viewpoint. Named canals are listed in the Geographic Index.

Adams, Charles Francis, Jr., 783  
administration, 653  
roads, 824, 826, 833  
school transportation, 926  
agricultural products, 649, 669, 687; also corn, grain,  
potatoes, soybeans  
Air Line Pilots Association, 727  
air traffic control, 720, 721, 723  
controllers, 718  
ambulances, 809, 876  
Atchison, Topeka and Santa Fe Railway, 763  
barge transport, 802  
behavioral studies  
urban travel, 896, 901, 904, 917  
bridges, 796, 843  
buses, 819; also school transportation, 925-927  
regulation, 732 (h)  
routing, 927  
scheduling, 821  
capacity  
urban transportation, 814  
central places, 663, 681  
Chesapeake Bay Bridge, 843, 851  
Cisneros, Francisco Javier, 693  
coal  
rail transport, 757  
commodity flow, 647, 657  
competition  
automotive industry, 743 (h)  
containerization, 675  
corn, 657, 679  
costs, 654-655  
commodity network, 647  
grain transport, 788  
rail, 758-759, 781  
shipping, 792 (h)  
urban travel, 905  
warehouse location, 924  
demand, 680  
air freight, 713  
airline, 716  
urban travel, 896  
used automobiles, 739  
Dial-a-Bus, 821  
drivers and driving, 833  
accidents, 874, 879, 893-894  
education, 875, 877, 880, 882, 884-885, 890, 892-893  
fatigue, 887  
headways, 867  
information system, 859  
merging, 862, 864  
passing, 867  
violations, 891  
Drivocator, 892  
emergency services, 881; also ambulances  
employment  
roads and, 838  
transportation and, 673  
urban transportation and, 811, 916  
Ford Motor Company, 754  
freight cars, 757  
investment, 766  
gasoline stations, 740  
grade crossings, 760  
grain, 788  
Great Britain. Supply and Transport Committee, 767  
guideways, 812, 817  
ice cream, 736  
Illinois Central Railroad labor, 768 (h)  
insurance  
automobile, 872, 886  
intermodal ownership, 661  
International Air Transport Association, 709, 710

International Civil Aviation Organization, 708  
intersections, 860, 863  
investment, 666  
bridges, 796, 843  
freight cars, 766  
railroads, 772 (h)  
roads, see 843-852  
land use, 651  
urban transport and, 808  
urban travel and, 898  
leasing  
automobiles, 745  
libraries  
travel-time to, 907  
locomotives, 773 (h)  
logistics, see physical distribution, 919-922  
McDonnell-Douglas Corporation, 729  
marketing  
airline, 705  
mergers  
railroad, 761, 780  
metals  
distribution, 920  
mode choice  
freight, 683  
urban travel, 903, 905  
moving companies, 734  
National Forest Road System, 849, 850  
Mayarit-Jalisco Highway, 841  
New York, New Haven and Hartford Railroad, 770 (h)  
Northern Pacific Railway Company  
locomotives, 773 (h)  
Ohio. Department of Highways  
field crews, 829  
parking, 858, 861  
pedestrian movement, 900  
pilots, 727, 728  
Port of New York Authority, 796  
potatoes, 682  
rates  
airline, 698, 710  
computerized, 645  
rail, 769 (h)  
soybeans, 684  
regulation  
airline, 696, 699, 711, 712  
automotive industry, 741, 746  
bus, 732  
rail, 769 (h)  
truck, 733  
residential location, 897  
Road Traffic Acts, 732  
routes  
airline, 712  
planning, 646  
road location, 827  
selection, 813  
routing  
school buses, 927  
tank ships, 786  
Rutland Railroad, 781  
St. Louis-San Francisco Railway System, 776  
scheduling  
airline, 701, 706  
airline crews, 707  
passenger service, 691  
rail commuter, 822  
tank ships, 787  
social impact, 664  
freeways, 832  
road transport, 735  
roads, 841  
Southern California Rapid Transit District, 820

Southern Pacific Railroad, 763  
soybeans, 684  
Stevens, John F., 779  
supplemental airlines, 704  
tank ships  
    routing, 786  
    scheduling, 787  
taxation  
    motor carriers, 734  
Teamsters Union, 738  
terminals, 689  
tourism, 656, 671  
tow boats, 800  
traffic assignment, 857, 868  
tramp ships, 790  
Transporter's Association, Ivory Coast, 660

travel, 670; also mode choice, tourism, trip generation,  
    trip purpose, urban travel analysis, 896-910  
        forecasting, 648  
        time factors, 692, 825, 899, 907  
trip generation, 898, 902, 904, 906, 908-910  
trip purpose; also commuting, 911-918  
    social, 909  
Tri-State Transportation Commission, 810  
  
Ugarit text, 791  
Union Traction Company of Indiana, 818  
United Automobile Workers, 751  
U.S. Civil Aeronautics Board, 712  
U.S. Travel Service, 671  
urban freight, 922  
V/STOL, 695  
wood products, 755

# CUMULATED AUTHOR INDEX

1-476, first issue; 477-644, second issue; 645-927, third issue

- Aangeenbrug, R.T. 404  
 Aaron, T.D. 580  
 Abernathy, L.M. 95  
 Abo-Baker, A.A.A. 477  
 Abrahamsson, B.J. 223  
 Ackerman, S.R. 739  
 Adams, R.T. 79  
 Adler, P. 188  
 Agapos, A.M. 429  
 Agnello, R.J. 843  
 Ahmed, S.B. 1  
 Akers, F.C. 122  
 Albert, W.I. 823  
 Albro, M. 769  
 Alcala, R.E. 514  
 Allen, W.B. 518  
 Allman, W.P. 157  
 Almond, G.L. 416  
 Altman, S.M. 370  
 Alvarez, E. 197  
 Ammassari, P. 146  
 Amos, F.E. 794  
 Anderson, A.A. 576  
 Anderson, D.G. 103  
 Ansari, N.A. 55  
 Appleton, J.H. 2  
 Ardakanian, A.A. 614  
 Arnold, T.R. 738  
 Aronne, J.F. 88  
 Asfahl, C.R. 645  
 Ashbaugh, J.G. 237  
 Ashmawy, S.E. 279  
 Ashton, W.D. 853  
 Assael, H. 123  
 Athay, R.E. 785  
 Axelrod, D. 447  
 Ayad, H.A. 468  
 Babcock, H.A. 807  
 Baehr, G.B. 770  
 Bailey, J.A. 312  
 Baker, R.L. 615  
 Baldo, F.V. 544  
 Balkus, K. 630  
 Barber, H.E. 804  
 Barghothi, J.I. 581  
 Barngrover, C.L. 56  
 Barr, B.M. 755  
 Barrow, R.V. 457  
 Baraness, R.W. 238  
 Bartlett, H.C. 57  
 Bateman, J.F. 272  
 Battaglia, S.T. 532  
 Battle, C.T. 380  
 Bauer, K.W. 315  
 Baughman, J.P. 233  
 Bauman, R.D. 453  
 Bayliss, B.T. 104  
 Beinborn, E.A. 478  
 Benn, B.A. 158  
 Bennett, W.B. 124  
 Berg, W.D. 824  
 Bergmann, D.R. 756  
 Bess, H.D. 433  
 Best, A.C.G. 159  
 Bettinger, C.O. 854  
 Bets, M.J. 27  
 Beuthe, M.V. 479  
 Bhalla, B.B. 254  
 Bieber, A. 3  
 Billheimer, J.W. 646  
 Billestein, R.E. 99  
 Bingham, R.C. 160  
 Birdsall, S.S. 609  
 Bishop, A.B. 832  
 Black, C.A. 330  
 Black, W.R. 545  
 Blackburn, A.J. 4  
 Blood, D.W. 4A  
 Bloom, M. 925  
 Bodiya, N.G. 125  
 Bonavia, M.R. 771  
 Bonnes, R.T. 926  
 Boone, J.W. 757  
 Boxer, B. 239  
 Boyce, B.N. 601  
 Boyce, D.E. 385  
 Boyce, R.R. 280  
 Bozoki, G. 647  
 Brach, P.L. 825  
 Bradford, C.H. 331  
 Brantl, C.M. 126  
 Brenner, R. 616  
 Brewer, K.A. 617  
 Brill, E.A. 855  
 Brilliant, A.E. 152  
 Brodsky, H. 405  
 Brown, D.A. 480  
 Brown, P.R. 546  
 Brown, R.L. 872  
 Brown, R.T. 28  
 Browne, W.G. 501  
 Brownee, R.E. 127  
 Bruins, R.G. 729  
 Buckley, A.E. 80  
 Buckwell, L.J. 758  
 Buehler, V.M. 96  
 Buerger, T. 708  
 Buhr, J.H. 371  
 Bullen, A.G. 618  
 Burch, F.W. 198  
 Cabot, A.V. 448  
 Caine, S.P. 437  
 Capelle, D.G. 352  
 Carroll, J.L. 255  
 Carson, R.B. 438  
 Carstens, R.L. 296  
 Carter, E.C. 695  
 Case, L.S. 582  
 Caspi, A. 751  
 Catanese, A.J. 911  
 Caudill, E.G. 547  
 Cernakian, J. 450  
 Chatfield, B.V. 826  
 Chatterjee, A. 648  
 Chen, G. 759  
 Cheng, P.C. 224  
 Cherry, R.L. 297  
 Chitwood, S.R. 298  
 Chuang, R.Y. 709  
 Churchill, G.A. 5  
 Clark, C.H. 199  
 Clark, J.E. 462  
 Clark, S.A. 200  
 Clark, W.D. 105  
 Claus, J. 740  
 Clement, D.E. 161  
 Coates, N. 147  
 Cochran, D.L. 502  
 Cockfield, R.W. 808  
 Colcord, F.C. 299  
 Cole, L.M. 332  
 Cooper, A.J. 97  
 Cotroneo, R.R. 439  
 Cotterman, W.W. 713  
 Cottingham, P.H. 602  
 Cox, A.A. 128  
 Coyle, J.J. 6  
 Cramer, C. 275  
 Crandall, R.W. 533  
 Crane, S.R. 333  
 Crawford, G.M. 201  
 Croll, R.F. 741  
 Crowther, S.J. 793  
 Cummings, L.P. 420  
 Cunningham, R.J. 418  
 Curtis, R.A. 225  
 Cutler, I. 29  
 Dafermos, S.C. 631  
 Dake, J.L. 610  
 D'Ambrosio, C.A. 162  
 Daniel, N.E. 89  
 Danielson, M.N. 313  
 Darby, L.F. 733  
 Darden, B.R. 129  
 Dare, C.E. 625  
 Darnton, D.C. 240  
 Dart, O.K. 372  
 Dartnell, A.L. 523  
 Davies, C.S. 912  
 Davis, G.M. 481  
 Davis, J.L. 300  
 Dawson, R.F. 353  
 Decker, L.E. 202  
 DeFelice, F. 475  
 DeHayes, D.W. 482  
 Demakopoulos, S.A. 714  
 Demetaki, M.J. 896  
 Derby, W.E. 241  
 DeSalvo, J. 483  
 DeSantis, R.P. 873  
 Desmarais, R.H. 767  
 Deutsch, S.E. 148  
 Deutschman, H.D. 897  
 Devanney, J.W. 484  
 DeWald, C.G. 856  
 Dial, R.B. 857  
 Dicer, G.W. 919  
 Dicesare, F. 817  
 Dick, T.J.O. 772  
 Dickeson, D.G. 795  
 Dickey, J.W. 469  
 Dickinson, E.H. 561  
 Dickinson, J.W. 585  
 Dippel, R.G. 58  
 Doganis, R.S. 716  
 Doherty, R.P. 717  
 Dohlan, G.H.v. 796  
 Doig, J.W. 301  
 Donnel, P.R. 833  
 Donahue, H.J. 485  
 Dorsey, J.W. 149  
 Draine, E.H. 30  
 Drew, D.R. 354  
 Driessner, D.H. 524  
 Drost, J.L. 752  
 Drucker, R.W. 7  
 Dueker, K.J. 281  
 Duriez, P. 189  
 Durr, F.R.E. 163  
 Dyckman, T.R. 130  
 Eads, G.C. 516  
 Eager, W.R. 355  
 Eckert, R.D. 589  
 Edwards, C.E. 131  
 Edwards, J.D. 458  
 Eicher, J.P. 760  
 Elassar, S.E. 649  
 Eliot Hurst, M.E. 898  
 Ellett, J.S. 734  
 Ellis, L.T. 49  
 Ellis, R.H. 590  
 El-Mazawi, A.A.E. 800  
 Elwell, H.H. 503  
 Emerson, C.R. 858  
 Emery, M.T. 874  
 Erb, E.C. 611  
 Erickson, C.O. 875  
 Fading, R.H. 132  
 Faden, A.M. 282  
 Fairburn, D.T. 470  
 Fan, K.K. 899  
 Farness, D.H. 486  
 Feldman, L.P. 133  
 Fernald, E.A. 586  
 Filante, R.W. 805  
 Filgas, J.F. 121  
 Finlay, B.W. 443  
 Fishbaugh, C.P. 445  
 Fishlow, A. 203  
 Fitzsimmons, J.A. 876  
 Fleischer, G.A. 323  
 Flink, J.J. 153  
 Flood, K.U. 106  
 Fogel, R.W. 204  
 Folkman, D.I. 562  
 Fortin, L.H. 430  
 Franklin, P.E. 563  
 Freitas, L.P. 59  
 Freund, P.F. 302  
 Frey, R.L. 773  
 Friedlaender, A.F. 334  
 Friedlander, A.E. 595  
 Friedman, C.S. 134  
 Fruchter, D.A.S. 877  
 Fruhan, W.E. 696  
 Fruin, J.J. 900  
 Fuller, J.W. 525  
 Fuller, J. 205  
 Gabbour, I.I. 471  
 Gabler, L.N. 335  
 Gellamore, R.E. 761  
 Gamal El-Din, M.K. 548  
 Gamba, J.C. 650  
 Gendre, D.A. 242  
 Garnel, D. 118  
 Gauthier, H.L. 607  
 Gellman, A.J. 504  
 George, P.J. 549  
 Gerig, F.A. 463  
 Gessaman, P.H. 651  
 Gieselman, R.D. 742  
 Giffin, W.C. 303  
 Gilster, H.L. 505  
 Ginn, J.R. 901  
 Glab, J.E. 652  
 Glaskowsky, H.A. 519  
 Gold, A.J. 421  
 Goldrick, M.K.D. 653  
 Goodmuff, J.L. 373  
 Goodwin, H.M. 603  
 Gordon, D.I. 206  
 Gottleber, H.A. 521  
 Gotwals, J.I. 283  
 Gould, R.B. 834  
 Graham, B.S. 718  
 Graham, K.L. 644  
 Gratto, C.P. 386  
 Grava, S. 284  
 Graves, B.D. 587  
 Gray, R.D. 267  
 Grecco, W.L. 387  
 Greenwood, G.W. 388  
 Greenwood, P.W. 487  
 Grey, A.H. 207  
 Grimes, A.R. 913  
 Gronau, R. 431  
 Grubbs, C.M. 336  
 Gunderson, G.A. 446  
 Gur, Y.J. 902  
 Hafner, L.E. 878  
 Hafner, J.A. 835  
 Haines, E.F. 801  
 Hackett, A.S. 879  
 Hales, R.B. 619

Hall, D.C. 880  
Hall, J.W. 836  
Hall, R.W. 753  
Hall, W.K. 809  
Hallin, R.R. 810  
Halvorson, P.L. 914  
Hamburg, J.F. 762  
Hammilton, R.L. 243  
Hammer, K.M. 208  
Hammond, W.E. 268  
Hanft, R.M. 7A  
Hanken, A.F. 381  
Hanton, B.B. 135  
Hanten, E.W. 90  
Harder, K.P. 558  
Hardwick, W.G. 31  
Harmon, G.M. 273  
Harral, C.G. 735  
Harris, C.E. 60  
Hartman, P.T. 251  
Hartwick, J.M. 654  
Hauer, E. 596  
Hauswald, E.L. 8  
Haveman, R.H. 256  
Hawkes, A.G. 356  
Hayman, R.W. 604  
Haynes, J.J. 374  
Haywood, R.M. 774  
Heathington, K.W. 859  
Heaver, T.D. 32  
Hebert, E.J. 61  
Hedges, C.A. 337  
Heidorn, R.D. 304  
Heinbach, C.L. 389  
Hejral, S.S. 847  
Helmers, H. 136  
Helvig, M. 526  
Hemmens, G.C. 390  
Hendricksen, H.S. 150  
Hensen, R.J. 591  
Herrin, G.W. 62  
Herzhdorfer, A.M. 357  
Heyl, R.J. 33  
Hicks, W.L. 638  
Higa, S. 164  
Hill, M. 285  
Hille, S.J. 165  
Hoel, L.A. 286  
Hoffman, D.S. 775  
Holcomb, K.J. 166  
Hold, W.T. 628  
Holden, H.D. 476  
Hopkins, G.E. 727  
Horna, H. 693  
Horton, F.E. 391  
Horton, G.R. 167  
Hoshi, T. 860  
Hoyt, H.M. 350  
Hruby, R.J. 168  
Huang, D.S. 137  
Hudson, D.V. 588  
Hughes, W. 63  
Humphreys, J. 620  
Hurt, B.E. 209  
Hussein, M.F. 305  
Hutchison, W.R. 797  
Hutchinson, J.G. 138  
Hutchinson, J.W. 382  
Hynes, C.V. 34  
Iago, R. 244  
Isibor, E.I. 837  
Israel, A. 9  
Jakubauskas, E.B. 190  
Janella, D.G. 10  
Jardin, A. 154  
Jarett, I.M. 107  
Jeffress, P.W. 811  
Jenkins, G.M. 697  
Jensen, J.M. 50  
Jessemin, W.A. 564

Johannsson, K. 786  
Johnson, D.S. 210  
Johnson, E.S. 577  
Johnson, J.A. 257  
Johnson, L.R. 844  
Johnson, L.A. 754  
Johnson, M.B. 287  
Johnson, T. 252  
Jones, D.H. 488  
Jones, J.R. 655  
Jones, J.P. 656  
Jones, P.A. 550  
Jordan, J.M. 657  
Jordan, W.A. 506  
Jorgensen, C.J. 51  
Joun, Y.P. 64  
Joux, M.C. 383  
Joy, O.M. 698  
Joy, S.C. 169  
Joyce, G. 392  
Kahn, A.M. 658  
Kain, J.F. 406  
Kamien, M.I. 191  
Kanafani, A. 861  
Kansky, K.J. 11  
Karkar, Y.W. 211  
Kasoff, M.J. 639  
Katz, H. 743  
Keller, H.E.M. 881  
Kelly, C.A. 12  
Karr, K.A. 212  
Khoury, N.T. 534  
Khumwala, B.A. 923  
Kisani, S.M. 407  
King, J.W. 258  
Kinney, A.R. 35  
Kirk, B.M. 862  
Kissling, C.C. 421A  
Kittrell, F.J. 744  
Kleiger, L.J. 65  
Klein, F.R. 572  
Kleu, S.J. 139  
Kloer, C.D. 551  
Knauerhase, R. 234  
Knowles, H.P. 170  
Koepeke, R.L. 36  
Kolko, G.M. 213  
Kolsen, H.M. 171  
Koshal, R.K. 172  
Kriebel, W.R. 108  
Krolick, R.H. 192  
Kruger, P.W.B. 288  
Kuehn, J.A. 838  
Kuhn, E.A.J. 454  
Laber, G.E. 13  
Lago, A.M. 421B  
Lakshmanan, T.R. 289  
Lam, T.H.C.Y. 472  
Lamb, S.W. 845  
Lambe, T.A. 640  
Lane, J.E. 173  
Lapin, H.S. 846  
Latchford, J.C.R. 375  
Latta, L.M. 538  
Lave, C.A. 632  
Lawrence, P.A. 699  
Lawrence, S.A. 226  
Leahy, E.P. 578  
Lean, D.P. 535  
LeBaron, A.D. 338  
Leclerc, W. 436  
Lee, N. 174  
Lehoczky, J.P. 863  
Leidecker, J.K. 700  
Leigh, R. 915  
Leighton, A.C. 52  
Leinkuhler, F.F. 109  
Leininger, W.J. 259  
Leone, R.D. 531  
Lev, B. 659

Levin, M. 864  
Levin, T.H. 81  
Levy, J. 14  
Lewis, B.C. 660  
Lewis, J.E. 37  
Lewis, R.J. 413  
Lewis, R.M. 376  
Lieb, R.C. 661  
Lightner, D.L. 768  
Idkens, J.D. 719  
Linder, E. 791  
Linton, T.E. 151  
Lisco, T.E. 408  
Little, R.S. 358  
Loewenstein, L.K. 409  
Long, W. 66  
Loubal, P.S. 633  
Lubore, S.H. 787  
Ludwig, A.K. 38  
Lumsden, K.G. 565  
Lund, J.W. 473  
Lund, L. 410  
Lynagh, P.M. 920  
Lynch, L.K. 411  
Lytle, J.S. 39  
McAfee, W.M. 214  
McArthur, J.H. 274  
McBride, G.A. 839  
McCall, J.B. 763  
McCallum, G.E. 175  
McCarney, B.J. 422  
McCutcheon, W.A. 260  
McDaniel, C.E. 882  
McDonald, H.L. 883  
McDonald, H.J. 788  
McDonald, W.S. 818  
MacDonald-Taylor, W.K.R. 423  
McDonough, C.C. 599  
McFarland, W.F. 848  
McGillivray, R.G. 903  
McGough, B.C. 324  
McInnes, A.T. 276  
MacIntosh, J.A. 15  
McKeever, J.L. 339  
McKinnell, H.A. 520  
MacKinnon, R.D. 489  
McLaughlin, F.M. 253  
McLaughlin, W.A. 393  
McLeary, J.W. 110  
McMahon, J.A. 710  
McPherson, K. 884  
McShane, W.R. 626  
Maddison, D. 720  
Makinen, G.E. 536  
Manheim, M.L. 827  
Marcus, H.S. 789  
Margolis, H.A. 537  
Maricle, K.E. 745  
Martinson, T.L. 840  
Mastrianna, F.V. 583  
Matthias, J.S. 424  
Matzie, D.E. 597  
Maurer, M. 245  
Maxfield, D.W. 425  
Marcer, C.R. 340  
Marcer, L.J. 215  
Mergen, B.M. 568  
Martins, H. 662  
Messer, C.J. 869  
Metaxas, B.W. 790  
Meuter, R.F. 663  
Mayburg, A.H. 664  
Mayer, D.J. 449  
Mihalic, D. 798  
Mikhail, A.D. 67  
Miklius, W. 111  
Miller, A.J. 359  
Miller, D.R. 452  
Miller, E.A. 40  
Miller, E.T. 465

Miller, P.D. 459  
Miller, J.C. 701  
Miller, R.C. 246  
Miller, R.E. 68  
Miller, R.F. 112  
Mills, R.C. 885  
Miner, H.C. 776  
Miyagi, M. 702  
Mize, J.L. 507  
Mock, W.L. 141  
Montgomery, C.C. 490  
Mooney, C.E. 261  
Moore, C.N. 142  
Moore, C.T. 341  
Moore, T.D. 342  
Morehouse, T.A. 592  
Morgan, E. 216  
Morlok, E.K. 16  
Morwedge, H. 569  
Motes, W.C. 491  
Mouchahoir, G.E. 916  
Munro, J.M. 41  
Murray, M.L. 886  
Nakkash, T.Z. 904  
Narodick, K.G. 84  
Neisser, A.C. 143  
Nell, R.E. 517  
Nelson, S.R. 746  
Nemeth, Z.A. 621  
Neusil, D.R. 394  
Newman, D.G. 316  
Newton, R.M. 927  
Newton, W.P. 100  
Nielsen, E.S. 552  
Niemyer, G.A. 155  
Nihan, W.L. 665  
Niklaus, J.L. 474  
North, R.H. 492  
Nupp, B.L. 17  
O'Brien, B.R. 317  
O'Shea-Rosso, F. 666  
O'Connell, W. 176  
O'Connor, A.D. 812  
O'Connor, A.M. 177  
O'Connor, W.E. 711  
Odcni, A. 721  
Odum, E.D. 217  
O'Dwyer, T. 493  
Ohi, A.W. 269  
Olmsted, H.J. 178  
Olsen, R.A. 887  
Olson, K.W. 849  
Olson, S.H. 218  
Oppendahl, R.A. 451  
Oppenlander, J.C. 360  
Orion, H. 85  
O'Sullivan, P.M. 667  
Osuna, E.E. 819  
Paden, D.L. 91  
Paiets, D.L. 888  
Panyan, W.D. 870  
Parker, R.E. 668  
Parker, A.J. 669  
Parks, R.J. 440  
Parks, R.W. 351  
Parris, H.W. 219  
Parsonson, P.S. 395  
Patterson, J.M. 227  
Patton, E.P. 527  
Payne, B.R. 850  
Pearson, P.M.L. 670  
Pendleton, W.C. 325  
Penn, W.M. 905  
Perle, E.D. 18  
Perry, P.L. 247  
Pestalozzi, G. 92  
Peters, W.H. 538  
Petersen, D.L. 554  
Peterson, T.C. 820  
Petrowski, W.R. 220



Pillsbury, W.A. 326  
Pinnell, C. 377  
Platt, N.M. 93  
Poinsette, C.R. 270  
Polenske, K.R. 19  
Pomeroy, L.K. 712  
Pontney, J.A. 144  
Pool, J.C. 841  
Porter, H. 396  
Powers, T.F. 671  
Prawda, J. 672  
Prieve, E.A. 306  
Pulley, K.M. 553  
Putman, S.H. 673  
Quarmby, D.A. 641  
Raciti, S.J. 494  
Rae, J.D. 262  
Ramm, W. 747  
Randall, R.H. 703  
Ranlett, J. 440A  
Ransom, R.L. 271  
Rapp, J.E. 343  
Rapping, L. 230  
Rashba, S.F. 871  
Raymond, S. 397  
Rea, J.C. 813  
Reckerd, T.E. 704  
Reddy, M.S. 361  
Redenius, C.M. 522  
Reeder, C.A. 777  
Reichman, S. 69  
Rethwisch, K.C. 539  
Reynolds, D.R. 398  
Reynolds, J.I. 70  
Richard, A.C. 806  
Richards, W.T. 889  
Richter, C.E. 674  
Rickards, A.E. 86  
Riddle, W.E. 736  
Rider, G.W. 921  
Ridgley, R.H. 441  
Ridley, T.M. 20  
Ringrose, R. 53  
Ritzel, D.O. 890  
Roberson, J.W. 221  
Roberts, P.O. 21  
Roberts, R.G. 119  
Robeson, J.F. 414  
Robinson, R. 799  
Robinson, S.E. 42  
Roggeveen, V.J. 179  
Roman, J.R. 764  
Romine, L.E. 193  
Rosa, E. da 344  
Rose, W. 71  
Rosen, S. 194  
Rosenberg, L.C. 277  
Ross, D.G. 778  
Rossi, T.A. 528  
Rothstein, M. 508  
Rowan, N.J. 362  
Ruchlin, H.S. 570  
Saatcioglu, O. 814  
Sachdev, L.S. 828  
Sachs, A. 180  
Sackrey, C.M. 75  
Safford, J.J. 573  
St. John, J.D. 779  
Salzborn, F.J.M. 822  
Sanders, E.G. 566  
Santow, L.J. 278  
Sattari-Tehrani, H. 181  
Satterly, G.T. 363  
Saunders, R.L. 780  
Sauter, J.V. 612  
Scarlett, M.J. 917  
Schary, P.B. 87

Scheiber, H.N. 54  
Scheiner, W.W. 364  
Schlacter, J.L. 829  
Schmidt, J.W. 906  
Schmidt, R.H. 608  
Schneider, L.M. 307  
Schoell, W.F. 802  
Schoennauer, A.W.W. 72  
Schofer, J.L. 593  
Schonberger, H.B. 499  
Schultz, C.R. 222  
Schultz, R.L. 705  
Schultz, T.G. 318  
Schulz, A.J. 891  
Schuster, J.J. 399  
Schwar, J.F. 290  
Schwartz, N.L. 263  
Scott, A.J. 495  
Scott, B.Y. 345  
Scrafton, D. 598  
Segelhorst, E.W. 314  
Seguin, V.C. 675  
Seidman, D.R. 365  
Sen, L. 676  
Sequin, C.J. 22  
Shafer, C.E. 43  
Shaffer, N.M. 248  
Shaner, W.W. 346  
Sharp, J.F. 23  
Shaughnessy, T.W. 907  
Shaw, G.C. 706  
Shaw, R.B. 113  
Sherwood, A.R. 460  
Shin, T.S. 730  
Shinn, R.D. 722  
Shirley, R.E. 114  
Shorrock, R.W. 865  
Shortreed, J.H. 366  
Shoup, D.S. 446A  
Shuldiner, P.W. 908  
Shunk, G.A. 642  
Sieck, L.K. 367  
Sigmund, E.W. 195  
Silberberg, E. 264  
Simons, N. 347  
Simons, R.M. 728  
Simpson, R.W. 723  
Singh, V. 613  
Sinha, K.C. 622  
Sleeper, D.C. 182  
Sloane, A.A. 120  
Smerk, G.M. 594  
Smith, B.L. 400  
Smith, E.G. 319  
Smith, R.D. 781  
Smith, W.H. 378  
Snell, J.E. 291  
Snow, C.R. 677  
Soberman, R.M. 842  
Solar, D. 82  
Solzman, D.M. 265  
Somers, A.N. 509  
Southard, W.R. 500  
Sparling, R.L. 678  
Spence, V.G. 559  
Spencer, J.W. 461  
Spindler, Z.A. 540  
Spritzer, A.D. 571  
Spychalski, J.C. 115  
Staelin, R. 748  
Stahl, S.W. 94  
Stanley, W.R. 44  
Steiner, H.M. 320  
Sternberg, C.W. 724  
Steuart, G.N. 725  
Stevens, G.T. 415  
Stewart, W.H. 584

Stochaj, J.M. 231  
Stockdale, J.M. 749  
Stone, C.E. 634  
Stopher, P.R.  
Stover, V.G. 327  
Stowers, J.R. 636  
Straszheim, M.R. 76  
Strawn, H.B. 679  
Strom, H.K. 77  
Strombom, D.A. 605  
Stuart, M.M. 510  
Stucker, J.P. 680  
Studnicki-Gizbert, K.W. 432  
Stutz, F.P. 909  
Sultan, S.M. 308  
Sundaralingam, K. 765  
Supersad, J.N. 292  
Surti, V.H. 629  
Swain, H.S. 681  
Swaine, H.R. 83  
Swann, L.A. 235  
Swanson, J.A. 555  
Swartz, T.R. 348  
Sweetser, A.G. 417  
Sydor, L.P. 803  
Taiber, D. 682  
Tarpley, F.A. 309  
Taylor, G.L. 511  
Taylor, J.I. 368  
Taylor, P.R. 782  
Taylor, W.C. 466  
Tharp, K.J. 321  
Thiriez, H. 707  
Thomas, R.P. 156  
Thompson, W.A. 419  
Thor, H.A. 232  
Thorndike, S.L. 293  
Thornton, C.A. 694  
Thornton, N.B. 851  
Thornton, R.L. 515  
Tolle, J.E. 866  
Tomazinis, A.R. 294  
Toscano, F.C. 24  
Townsend, H. 683  
Trachtenberg, S. 556  
Treas, C.E. 384  
Triandafyllides, A.P. 78  
Trindell, R.T. 249  
Troub, R.M. 434  
Trueman, R.E. 426  
Trzepacz, M.E. 910  
Tsurumi, H. 435  
Turner, A.K.F. 830  
Turton, B.J. 183  
Twark, R.D. 328  
Uhrig, J.W. 45  
Untervagner, J. 444  
Unwin, E.A. 467  
Upton, H.R. 783  
Van, B.G.  
Van Auker, S. 924  
Van Zant, L. 442  
Vars, R.C. 852  
Vaughn, M.D. 512  
Velde, P.D. 684  
Ventura, J.S. 766  
Verghese, K.E. 46  
Viets, R.L. 737  
Viles, P. 250  
Vlasin, R.D. 329  
Vodrazka, W.C. 606  
Voelker, G.E. 784  
Vogel, R.J. 455  
Volotta, A. 116  
Von Dohlan, G. 579  
Vuchic, V.R. 310  
Wachs, M. 295

Walgreen, J.A. 228  
Walker, H.P. 102  
Wallace, N.E. 627  
Wallace, R.S. 715  
Walterman, T.W. 731  
Walton, G.M. 236  
Walton, J.R. 322  
Walzer, J.F. 428  
Warner, L.B. 266  
Warner, S.L. 401  
Warnshuis, P.L. 369  
Wassink, D. 541  
Wassom, J.C. 685  
Waters, W. 567  
Watson, P.L. 686  
Wattles, G.M. 25  
Wattleworth, J.A. 379  
Weaver, J.K. 892  
Weber, D.C. 893  
Webster, L.A. 623  
Wegmann, F.J. 456  
Wehr, P.W. 560  
Weiner, G. 184  
Weiner, S. 867  
Weinstein, S.A. 894  
Weintraub, A.L. 47  
Wellborn, D.M. 117  
Westacott, G.H. 750  
Westerhold, B. 48  
Weston, G.A. 185  
Wheat, C.M. 557  
Wheeler, J.O. 412  
Wheeler, P.K. 600  
White, L.J. 542  
White, L.C. 26  
Whitehead, J.I. 402  
Whitehurst, C.H. 229  
Whittington, F.B. 922  
Whybark, D.C. 98  
Wiener, R.S. 624  
Wilbanks, T.J. 687  
Williams, A.F. 101  
Williams, C.G. 196  
Williams, T.A. 821  
Williams, W.I. 732  
Williamson, H.F. 496  
Wilson, A.G. 497  
Wilson, F.R. 643  
Wintrobe, N.L. 895  
Witayarut, P. 637  
Witczak, M.W. 831  
Wohl, M. 349  
Womer, N.K. 688  
Wood, D.F. 726  
Woodhull, J. 815  
Woods, D.L. 464  
Worrall, R.D. 403  
Worsley, S. 574  
Wortman, R.H. 689  
Wright, B.H. 498  
Wright, F.J. 311  
Wright, R.J. 575  
Wright, W.R. 186  
Wyand, M.J. 74  
Wykoff, F.C. 543  
Yagar, S. 868  
Yaseen, D.W. 690  
Yates, R.C. 792  
Young, D.R. 691  
Yu, E.Y. 918  
Yu, J.C. 513  
Yu, T. 145  
Yucel, N.C. 427  
Zakaria, T. 816  
Zane, E.A. 187  
Zehr, D.E. 529  
Zucker, S. 692